for paging services. They were identified as business establishments with staff members or other employees who (1) work outside a central location or away from a telephone operator/dispatcher and (2) must be readily accessible for instructions or other matters. Respondents who answered these "screening" questions but did not meet these two criteria were not considered part of the target market and were not asked any further questions. In the Louisiana survey, 231 out of 494 responding business establishments (46.8 percent) were included in the sample target market, while 77 of 157 met the criteria in Texas (49.0 percent).

Target market respondents were asked several additional questions. These included the following:

- Their current and planned use of mobile services, *i.e.*, mobile radio, cellular, and paging.
- Their opinion of the usefulness of the proposed advanced services and service features to their businesses. These responses were scaled by order of utility to the respondent.
- Their interest in obtaining the advanced paging services at a stated price.

For those respondents that were interested in obtaining the advanced paging services at the stated price, various other questions were asked. To those interested respondents who already use or plan to use mobile services, questions were asked about the extent to which the new services might replace or be in addition to their current mobile services. Finally, to those interested respondents who already use paging service, questions were asked about how they might use the new services.

B. Survey Results

1. Sampled Population and Target Market

As shown in Table 1, the total population of business establishments in each of the three industrial categories in the Louisiana survey area are as follows: Group 1 – 15,945; Group 2 – 5,086; Group 3 – 1,224. The Texas survey sample represented a population of 11,476 establishments – all from the Group 2 industrial category.

As discussed in Section III.A, Questions 2 and 3 on the questionnaire were intended to identify respondents who were part of the pager services "target market." Table 1 shows, overall, that 46.8 percent of the Louisiana survey respondents fell into the target market. For the three groupings, the target market percentages are 46.7 percent for Group 1, 45.7 percent for Group 2, and 48.1 for Group 3. In the Texas market, 49.0 percent of survey respondents are in the target market.

The data in Table 1 also confirm the *a priori* definition of the "target market" (for those industrial categories only) as being those business establishments which have a strong demand for mobile services.[4] Over 93 percent of the target market respondents in the Texas and Louisiana survey areas are presently utilizing a mobile service (94.4 percent in Louisiana and 93.5 percent in Texas). For the three industrial categories combined, the Louisiana market survey is estimated to have 10,359 business establishments in the target market. For the single Group 2 industrial category surveyed in the Texas market, this figure is 5,623.

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[4] As noted earlier, the "target market" establishments were those that have employees or staff that (1) worked outside the office or away from the central operator but (2) must remain accessible.

Additionally, the survey results indicate that approximately 58 percent of the Louisiana target market respondents not now using mobile services do plan to use mobile services in the future while approximately 40 percent of such respondents in the Texas market plan to do so in the future.[5] Moreover, this high correlation between the "target market" establishments and those using or planning to use mobile service is also true for each of the three industrial categories separately.

On average, the target market respondents had many full-time employees. For Louisiana groups 1, 2, and 3, the averages are over 18, 46, and 36; for Texas group 2, the average is over 26. For those target market respondents which also currently use mobile services, the average numbers of full-time employees are slightly more and for those not using (or not planning to use) mobile services the averages are considerably smaller – 8, 3, less than 4, and less than 7, respectively, for Louisiana Groups 1, 2, and 3 and Texas Group 2. Further, respondents who subscribe to some type mobile service have multiple individuals using the service. In the Louisiana markets, respondents in Groups 1, 2, and 3 had an average of over 6, 13, and 17 individuals, respectively, who use the mobile service now. In the Texas market, that figure is 6. Thus, each target market business represents multiple potential advanced paging service users.

2. Utility of Proposed Service Features

Questions 7 through 12 on the questionnaire were designed to solicit information from the target market respondents on the usefulness of various features of the proposed advanced paging services. This information is summarized in Table 2.

Six different sets of service features were tested. These are ranked as follows:

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[5] The small number of respondents to these specific questions make the results less reliable than for the prior statistics described.

Usefulness Ranking

Service Feature	Louisiana	Texas
Sending Voice Messages (Q7)	3	3
Storing Voice Messages in Pager (Q8)	4	4
Sending Display Messages (Q9)	2	1
Sending Data and Receiving Brief Acknowledgements (Q10)	6	6
Notification of Message Receipt (Q11)	1	2
Sending Messages from Computer Without Use of Telephone (Q12)	5	5

The majority of respondents in the Louisiana and Texas markets agreed that the two most useful features were the response-back (Q. 11) and sending of display messages (Q. 9). Similarly, in both surveys, sending voice messages (Q. 7) was ranked third most useful, and the least useful features were storing voice messages in a pager (Q. 8) and sending wireless messages from mobile computers (Q. 12).

Specific results of these questions are discussed below.

Usefulness of Sending a Voice Message to Employees Anywhere (Question 7): 42.8 percent of the Group 1 target market in Louisiana surveyed responded that this would be a useful service.[6] The comparable figures for Groups 2 and 3 are 41.1 percent and 40.8 percent. For the Texas Group 2 survey, 40.3 percent responded that the service would be useful.

Usefulness of Having the Capability of Storing a Voice Message in a Pager (Question 8): in the Louisiana Group 1, 38.6 percent indicated that this feature would be useful. This percentage for Group 2 is 47.1 percent and for Group 3 is 32.9 percent. The comparable figure in Texas is 39.0 percent – somewhat less than the usefulness percentage in Louisiana.

[6] The term "useful" reflects the total of the responses indicating "very useful" and "somewhat useful."

Usefulness of Sending a Display Message to Employees (Question 9): the responses to this question indicate that the Louisiana respondents considered a display message to be more useful than a voice message. In the Louisiana markets, about 50.0 percent of the Group 1 respondents believe the service to be useful. In Group 2, the figure is 37.0 percent, while for Group 3 the figure is 40.8 percent. In the Texas market, 49.4 percent of its Group 2 target market respondents found the message display feature useful – this is a slightly higher figure than found in the overall Louisiana markets.

Usefulness of Having the Capability of Sending Data to a Pager (Hand Held Computer) and Receiving a Brief Reply (Question 10): this feature received the lowest utility rating of the questions asked, although a substantial number of respondents still indicated interest. In Louisiana Group 1, 22.9 percent of the target market respondents felt the service would be useful. For Groups 2 and 3, the figures are 16.4 percent and 18.4 percent, respectively. In the Texas market, 16.9 percent of the Group 2 target market respondents considered the feature useful – somewhat greater than the proportion in Louisiana.

Usefulness of Ease of Response by Paged Person to Notify Message Originator of Receipt of Message (Question 11): among the features described in the survey, this feature received the highest utility rating from all three industry groupings in the Louisiana markets and the second highest utility rating from the Group 2 respondents in the Texas market. In Louisiana Group 1, 54.3 percent said the feature would be useful. In Group 2, 61.2 percent found the feature to be useful, while in Group 3, 51.3 percent indicated it would be useful. For the Texas Group 2 target market respondents, 46.8 percent indicated the feature would be useful – this is considerably lower than the result for Group 2 in the Louisiana markets.

Usefulness of Sending a Page or Display Message from a Computer (Question 12): 28.6 percent of the Group 1 target market respondents in Louisiana stated they would be find the feature useful. For the other two groupings, the figures are 21.2 percent (Group 2) and 23.7 percent (Group 3). In the Texas market, 23.4 percent of the Group 2 target market respondents found the new feature useful.

3. Prospective Users of Proposed Services

Question 13 of the questionnaire asked the target market respondents to indicate their interest in the new paging services presuming stated price levels.[7] Table 3 presents their responses to this question. In the Louisiana markets, the level of interest at the stated price was as follows: 28.6 percent for Group 1 target market respondents, 17.6 percent for Group

[7] The price levels stated were $150-$200 for the pager plus a monthly service cost of $10-$12 for 150 messages. Beyond 150 messages, each additional message is 5 cents. Those prices were estimated by Freeman Engineering.

2 target market respondents, and 19.7 percent for Group 3 target market respondents. In the Texas market, the interest level of the Group 2 target market respondents was less than that in Louisiana – 7.8 percent. Further, the response data indicate that the average number of individuals at those business establishments that would use the new service and their estimated average number of messages per month are as follows:

	Average Number of Users Per Establishment	Average Monthly Messages Per User
Louisiana		
Group 1	6	57
Group 2	34	332
Group 3	9	46
Texas		
Group 2	3	70

When converted to an estimate of the total number of business establishments in those industrial categories that would be interested in the service at the stated price, the results are 2,655 establishments and 27,910 individuals who would initially use the service in the Louisiana markets and 438 establishments and 1,170 individuals who would initially use the service in the Texas market (Table 4).[8] As noted before, this is not an estimate of the total initial demand for the service since business establishments in many other industrial categories were not surveyed.

[8] When extrapolated to the relevant industrial category populations, the respondents' estimates of monthly messages on the new service are 263,600 for the Louisiana markets and 30,700 for the Texas market.

Those respondents who indicated interest in the service at the stated price level and who also currently use or plan to use mobile services were then asked a few additional questions (Questions 13c-e).[9] In the Louisiana markets, 82 percent of those respondents indicated they would replace some or all of their present services with the proposed services. However, 55 percent of these same respondents also said they would add new services. These are interesting results. Since the base number of firms was the same for each question, *i.e.*, would they add or replace, the sum of the two figures (greater than 100 percent) suggests that some establishments would replace present mobile services in addition to purchasing new services.

Many of the respondents who were interested in the proposed services at the stated price presently use paging services.[10] In the Louisiana markets, 76 percent of the "interested" respondents now use pagers while in Texas the ratio is about 83 percent.[11] As noted above, some of these respondents would use the proposed advanced paging service to either replace or add to their current paging services. Moreover, the data show that about 24 percent of those interested in the service in Louisiana and about 17 percent of those in Texas would be new paging subscribers.

[9] Because fewer respondents answered these questions, the Louisiana data represent the total response of the three groups. In Texas, there were not enough respondents to produce reliable results for these questions.

[10] Of those Louisiana respondents interested in the new services at the stated price and already using paging, the following distribution applies: 71.1 percent have display message paging, 5.3 percent have voice paging, 13.2 percent have both, and 10.5 percent have something else.

[11] As noted elsewhere, the number of such respondents was so small as to make the percentage response less reliable than those of some of the other questions.

For those "interested" respondents who also presently use a paging service, several other questions were asked (Question 13e). When asked about the effect of the pager response-back feature, 36.8 percent indicated they would send more paging messages, 21.1 percent said they would send less messages, and 15.8 percent would not change their number of paging messages. Separately, another question asked whether the response feature would reduce the number of repeat calls. The majority (over 92 percent) of the "interested" respondents who presently use paging indicated that repeat calls would be reduced.

Finally, in response to the last question, over one-half (58.3 percent) of the respondents interested in the proposed services and presently subscribing to a non-voice paging service said they would switch to a voice service that could acknowledge the receipt of the page and store the message, if necessary.

IV. INTERVIEWS OF PAGING CARRIERS

A. Interview Approach

TRANSCOMM contacted radio paging carriers throughout the country to determine their general level of interest in the proposed technology as a means to provide the proposed advanced services, as well as their opinion of its usefulness in their systems and operations. The carriers contacted were selected in two ways. First, a few local/regional operators in each of the top 30 MSAs were identified.[12] These included both small and large independents as well as local operators belonging to national companies. Second the

[12] The only top-30 MSA not surveyed in this fashion was New Orleans. This was because (a) KCA was conducting a business survey in this market and (b) Radiofone, an affiliate of Freeman Engineering which had already been contacted by TRANSCOMM, provides paging services there.

largest paging companies in the country, in terms of local operations and subscribers, were identified.

For each company or operator, an appropriate technical, marketing or business development person was faxed a brief description of the proposed technology and some of the advanced paging services which could be provided with it. (Attachment 2 includes a copy of the description sent to each individual.) The description was developed in conjunction with Freeman Engineering assistance and review.

The written description was faxed to fifty-one company representatives, including the corporate offices of the largest paging organizations in the country. Interviews with individuals from twenty-one different carriers were conducted. Before each interview, each individual confirmed that he had reviewed the technology and service descriptions that had been sent. The interviewed individual was asked for his comments on (a) the description of advanced services and technology sent to them and (b) whether they saw a need, within their own system(s), for the proposed technology and services. In general, the focus of the interview was on the major distinguishing characteristics of the technology and services in relation to current paging services:

- The increased capacity for all services and the ease of capacity expansion in the future,
- Sufficient capacity to offer high-quality voice paging to all their customers, and
- The response-back or acknowledgement capability of the pagers.

Information was also acquired on the geographic coverage areas of the carriers' systems and, in some cases, number of subscribers. Information from these interviews is summarized in the next section.

B. Interview Information Acquired

The following summarizes the comments from the twenty-one interviews:

- All but three small independent carriers were "interested" in the possibility of providing both advanced voice and pager response-back services in their areas and felt that those advanced services would be marketable.

  - Seven of the carriers were more interested in the response-back feature than in high-capacity, high-quality voice paging. Several mentioned that customers had indicated a need for such a feature.

  - Three of the carriers were more interested in the high-capacity, high quality voice paging. They felt that there could be a strong market for quality voice paging.

  - The three small carriers that were not interested, indicated that they faced considerable price competition in their markets, were unable to fill their current capacity and were concerned about incurring any more capital cost.

- For most of the respondents, the ability to provide advanced services was more "interesting" than simply having an increase in future capacity (*i.e.*, for current service offerings) and ease of capacity expansion (*i.e.*, avoidance of service disruption caused by changing channel speeds or modulation schemes).

- Some of the smaller independents and local operators (belonging to larger national organizations) felt that there was little demand for voice as currently provided over existing systems. Because of current capacity limitations, they had been discouraging the use of voice paging (*e.g.*, by higher price or lower transmission priority) and they were not using pagers which could store the voice message for later retrieval.

- Many larger and a number of small operators recognized that the ability to offer these advanced paging services could improve their competitiveness, provide a "hedge" against future PCN-type services, and allow them to increase revenues through value-added features.

Table 1

ESTABLISHMENTS IN THE LOUISIANA AND TEXAS MARKETS

Establishments	New Orleans–Baton Rouge: Group 1: General Construction	New Orleans–Baton Rouge: Group 2: Medical & Government	New Orleans–Baton Rouge: Group 3: Marine & Petrochemical	New Orleans–Baton Rouge: Total	Dallas–Fort Worth: Group 2: Medical & Government
Total MSA Universe	15,945	5,086	1,224	22,255	11,476
Survey Universe					
Total Respondents	150	186	158	494	157
Target Market	70	85	76	231	77
Mobile Users	65	81	72	218	72
Interested in Proposed Services	20	15	15	50	6

Table 2

INTEREST IN PROPOSED SERVICE FEATURES
Percentage of Target Market

Feature–Usefulness	New Orleans–Baton Rouge: Group 1: General Construction	New Orleans–Baton Rouge: Group 2: Medical & Government	New Orleans–Baton Rouge: Group 3: Marine & Petrochemical	Dallas–Fort Worth: Group 2: Medical & Government
	%	%	%	%
A–Very & Somewhat Useful	42.8	41.1	40.8	40.3
B–Very & Somewhat Useful	38.6	47.1	32.9	39.0
C–Very & Somewhat Useful	50.0	37.0	40.8	49.4
D–Very & Somewhat Useful	22.9	16.4	18.4	16.9
E–Very & Somewhat Useful	54.3	61.2	51.3	46.8
F–Very & Somewhat Useful	28.6	21.2	23.7	23.4

Service Definitions:
A: usefulness of being able to send a voice message to employees anywhere in your metro area (Q7)
B: usefulness of having the capability of storing a voice mesage in the individual's pager (Q8)
C: usefulness of being able to send a display message to employees anywhere in your metro area (Q9)
D: usefulness of having the capability of sending data to pagers and receiving brief acknowledgements (Q10)
E: usefulness of providing easy notification of message receipt capabilty to the paged individual (Q11)
F: usefulness of being able to send a page or display message from a computer without a telephone (Q12)

Table 3

PERCENTAGE OF ESTABLISHMENTS INTERESTED IN PROPOSED SERVICES AT STATED PRICES

Group	Percent of Total Market	Percent of Target Market
	%	%
Louisiana		
Group 1	13.3	28.6
Group 2	8.1	17.6
Group 3	9.5	19.7
Texas		
Group 2	3.8	7.8

Notes: Group 1 = General Construction
Group 2 = Medical & Government
Group 3 = Marine & Petrochemical
Rate Parameters: \$150–\$200 for pagers and monthly service costs of \$10–\$12 for 150 messages, plus 5¢ for each *additional message*

Table 4

NUMBER OF ESTABLISHMENTS INTERESTED IN PROPOSED SERVICES AT STATED PRICES

	New Orleans–Baton Rouge				Dallas–Fort Worth
	Group 1: General Construction	Group 2: Medical & Government	Group 3: Marine & Petrochemical	Total	Group 2: Medical & Government
1. Total Universe	15,945	5,086	1,224	22,255	11,476
2. Target Market Factor	0.467	0.457	0.481		0.490
3. Target Market (L1 x L2)	7,446	2,324	589	10,359	5,623
4. Location Interest Factor	0.286	0.176	0.197		0.078
5. Locations Interested in Proposed Services at Stated Prices (L3 x L4)	2,130	409	116	2,655	438

Note: line 1 and factors from the KCA report, Attachment 1.

Attachment 1

KCA RESEARCH INC.
TELEPHONE SURVEY REPORT

November 6, 1992

RESULTS OF A SURVEY OF BUSINESS ESTABLISHMENTS IN THE NEW ORLEANS, BATON ROUGE, AND DALLAS/FORT WORTH AREAS REGARDING THE MARKET FOR PAGING AND OTHER COMMUNICATIONS SYSTEMS

Prepared for:

Transcomm, Inc.
6521 Arlington Blvd., Suite 214
Falls Church, VA 22042

Prepared by:

KCA Research Division
David C. Cox & Associates, Inc.
5501 Cherokee Avenue, Suite 111
Alexandria, Virginia 22312
(703) 642-5220

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RESULTS OF A SURVEY OF BUSINESS ESTABLISHMENTS IN THE NEW ORLEANS, BATON ROUGE, AND DALLAS/FORT WORTH AREAS REGARDING THE MARKET FOR PAGING AND OTHER COMMUNICATIONS SYSTEMS

1. Introduction

This report describes the results of a market research survey conducted in the areas of New Orleans, Louisiana, Baton Rouge, Louisiana, and Dallas/Fort Worth, Texas regarding the market for a proposed new paging service. The survey was conceived by Transcomm, Inc. of Falls Church, Virginia as part of its technical support to one of its clients who is engaged in the development of a submission to the Federal Communications Commission regarding the new paging service. The survey instrument was designed by Transcomm and provided to KCA for its use. This survey instrument is found in the Appendix of this report.

The proposed new paging service would provide companies the choice of using a pager that either transmits a voice message or displays a message on a small screen, or the user can employ either their own laptop computer or a small hand-held computer as the unit to receive as well as transmit display messages and other data. The service is unique in the following ways:

- for a message display, a message can be sent by either phone or computer;
- a message display can also be sent from a laptop of a hand-held computer out in the field without the use of a phone. And, one laptop computer can communicate with another without use of phone service;
- the voice or message display pager can store messages for retrieval at a future time, or, if desired, be sent to a separate electronic mailbox service;
- the individual receiving the voice or display message could notify the individual who sent it that he or she received the message and will take a specific action;
- the pager responses can be customized to fit the user's needs by allowing a set of specific responses such as: "I have received the message", "Please send message again", "I will go later today", or "I will go tomorrow".

The main goals of the study were:

- to assess the existing market for paging and other communications services in the target areas; and
- to determine the potential market share for the new paging service under consideration.

This report contains a methodology section, which includes technical information about the design of the survey, a results section for the Louisiana cities, and a results section for the Dallas/Fort Worth area. These sections provide tabular displays of information obtained in the survey for the two different areas of interest.

2. Methodology

Interviews were conducted at KCA Research's Alexandria, Virginia dialing center from October 26, 1992 to November 3, 1992. All dialing was completed through the use of KCA's computer assisted telephone interviewing (CATI) technology. Data was analyzed in-house with SPSS/PC+, a statistical analysis software package for the social sciences.

The survey instrument, a copy of which is shown in the Appendix, was developed by Transcomm in cooperation with its client and supplied to KCA Research to be programmed on its CATI (Computer Assisted Telephone Interviewing) system.

In order to ensure an adequate number of respondents from different types of businesses in the target areas, a stratified sampling design was used. According to this design, a quota of 150 interviews was set for each of three distinct types of businesses in the combined New Orleans and Baton Rouge metropolitan statistical areas (MSAs). The business types were defined by Standard Industrial Classification (SIC) codes. These codes, which were originally developed by the Department of Commerce, are used widely to classify businesses and other organizations into groups in which like functions and activities are done. For example, SIC codes beginning with the digits 15, 16 or 17 are engaged in the construction business. Transcomm and its client defined three distinct strata of businesses or other organizations for the survey by indicating a specific set of SIC codes to be included in each stratum. Those strata are defined as follows:

1. **Construction and Building Services and Supplies**

   SIC codes included:

15	General Building Contractors
16	Heavy Construction, Ex. Building
17	Special Trade Contractors
503	Lumber and Construction Materials
505	Metals and Minerals, Except Petroleum
506	Electrical Goods
507	Hardware, Plumbing and Heating Equipment
508	Machinery, Equipment, and Supplies
52	Building Materials and Garden Supplies
64	Insurance Agents, Brokers, and Service
65	Real-Estate
73	Business Services

2. **Medical and Emergency Services and Supplies**

SIC codes included:

4119	Local passenger transportation, NEC
504	Professional and Commercial Equipment
80	Health Services
922	Public Order and Safety
94	Administration of Human Resources

3. **Marine and Petrochemical Businesses**

SIC codes included:

13	Oil and Gas Extraction
281	Industrial Inorganic Chemicals
29	Petroleum and Coal Products
3533	Oil and Gas Field machinery
373	Ship and Boat Building and Repairing
444	Water Transportation of Freight, NEC
448	Water Transportation of Passengers
449	Water Transportation Services
46	Pipelines, Except Natural Gas
4922	Natural Gas Transmission
4925	Gas Production and/or Distribution

In addition to the three strata defined above for the New Orleans and Baton Rouge MSAs, a fourth stratum was identified to be surveyed in the Dallas/Fort Worth, Texas MSA. In that area, only the Medical and Emergency Services and Supplies stratum was sampled. As in the other strata, a target of 150 respondents was set. The sample was purchased, according the specifications above, from American Business Lists of Omaha, Nebraska. That company is one of the major suppliers of business samples in the country. The list was developed from Yellow Pages listings and verified by telephone contact.

In order to produce estimates of total numbers of establishments, information about the total number of establishments in the universe must be used. Table 2-1 contains the number of total establishments in the strata as defined above and the number of completed interviews obtained in each. These numbers will be used to make projections from the sample to the total universe of establishments in the target areas.

Table 2-1. Sample Universe

	Number in the Universe	Number of Respondents
New Orleans/Baton Rouge		
- Construction	15,945	150
- Medical/Emerg Svc	5,086	186
- Marine/Petrochemical	1,224	158
Dallas/Fort Worth		
- Medical/Emerg Svc	11,476	157

Interviews were completed with a total of 494 respondents in the New Orleans and Baton Rouge areas and a total of 157 respondents in the Dallas/Fort Worth area. A complete interview was defined as one in which at least Questions 2 or 3 of the survey were answered. At a 95 percent confidence level, the maximum error level for the 494 interviews obtained in the New Orleans and Baton Rouge areas is $\pm$ 4.4 percentage points. For the sample of 157 in the Dallas/Fort Worth area, a similar error bound is $\pm$ 7.8 percentage points. In addition to these completed interviews, results of dialing are given in Table 2-2.

Table 2-2. Resolution of Telephone Numbers Dialed

	New Orleans/Baton Rouge			Dallas/ Fort Worth
	Construction and Bldg Svc	Medical/ Emerg Svc	Marine/ Petrochem	Medical/ Emerg Svc
Initial Refusal	59	48	52	22
Not reached 5 tries	17	14	19	10
Answering service	20	20	21	25
Disconnected	35	23	35	15
Not a Business	2	1	3	4
Moved	0	1	2	2
Out of Business	2	4	1	1
Completes:				
"No" to Question 2	66	85	78	60
"No" to Question 3	14	16	4	20
Partially complete	4	8	8	2
Fully complete	66	77	68	75
TOTAL	285	297	291	236

Interviews were obtained from cognizant persons at the business establishments contacted. Interviewers were trained to ask for the individual at that establishment who is responsible for making decisions regarding the purchase and use of communications equipment such as mobile telephone, cellular telephone, and paging systems.

The survey response rate is generally computed as the percent of completed surveys divided by the total number of in-scope cases. Such cases are defined as those businesses reached by the phone survey and qualified to participate. It excludes such cases as non-businesses, disconnected telephone numbers, companies who have gone out of business or moved, and answering services or machines. The total number of in-scope cases encountered for this survey was 892 and the total number of completed cases was 651. Therefore, the response rate was 73 percent.

3. Results of the Survey for the New Orleans and Baton Rouge, Louisiana Areas

The results obtained from the survey for the New Orleans and Baton Rouge, Louisiana metropolitan statistical areas are presented in the following series of tables. Table 3-1 summarizes the responses to Questions 2 through 5 of the survey. The first line of Table 3-1 contains the total number of cases in the universe as defined by SIC code and location (in the MSAs of interest). Line 2 contains the total number of completed cases in each stratum. These numbers are consistent with Table 2-1 in the methodology section of this report. Line 3 of the table contains the percent of respondents in the respective strata who answered "Yes" to the question about whether they have staff members who work outside of their business location (Question 2 of the survey). The reader is referred to the Appendix for the exact wording of this and other questions of the survey. Note that this percentage as well as all of the other percentages in Table 3-1 are based upon the full sample of 494 respondents. For the remainder of this report this group will be called the set of "all respondents."

Those who answered "Yes" to Question 2 were also asked Question 3 as to whether their outside staff must be accessible. The percent answering "Yes" to this question is shown on Line 4 of Table 3-1. The group of respondents answering "Yes" to Question 3 is identified for the remainder of this report as the "target population." This group contains the establishments who are expected to be the main market in those industry groupings for the paging device under consideration. The number of such cases which turned out to be included in the sample of New Orleans and Baton Rouge responding establishments was 231 cases. Many of the important estimates of this report will be based upon this subgroup within the sample.

Line 5 of Table 3-1 contains the percent of cases answering "Yes" to a question as to whether they currently use mobile radio, cellular telephone, or paging services to reach their employees (survey Question 4), while Line 6 contains the percent who plan to use those services. The percent who either currently use or plan to use the listed communications services is shown in the last line of the table.

Table 3-1
New Orleans/Baton Rouge, Louisiana
Responses to Questions 1-5--Number of Locations
(All Respondents)

	CONSTRUCTION AND BUILDING SERVICES AND SUPPLIES	MEDICAL AND EMERGENCY SERVICES AND SUPPLIES	MARINE AND PETROCHEMICAL BUSINESS
1. TOTAL UNIVERSE OF LOCATIONS	15,945	5,086	1,224
2. TOTAL NUMBER RESPONDING LOCATIONS	150	186	158
3. PERCENT LOCATIONS WITH OUTSIDE STAFF (YES TO Q2)	56.0%	54.3%	50.6%
4. PERCENT LOCATIONS WITH OUTSIDE STAFF WHICH MUST BE ACCESSIBLE (YES TO Q3)	46.7%	45.7%	48.1%
5. PERCENT LOCATIONS USING MOBILE SERVICES (YES TO Q4)	43.3%	43.5%	45.6%
6. PERCENT LOCATIONS PLANNING TO USE MOBILE RADIO SERVICES (YES TO Q5)	2.0%	1.1%	1.3%
7. PERCENT LOCATIONS USING OR PLANNING TO USE MOBILE SERVICE (YES TO Q4 OR Q5)	45.3%	44.6%	46.9%

Notes:

(1) Locations = Establishments.

(2) Data from all responses. Percent locations derived as percent of total positive and negative responses to Questions 2 and 3.